**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

Thrift, et al.

Serial No.: 08/419,229

Filed: 4/10/95

For:  VOICE ACTIVATED HYPERMEDIA SYSTEMS USING GRAMMATICAL METADATA

TI-20205

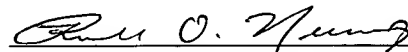Examiner: Chawan

Art Unit: 2308

## APPEAL BRIEF TRANSMITTAL FORM

Assistant Commissioner for Patents
Washington, DC  20231

Sir:

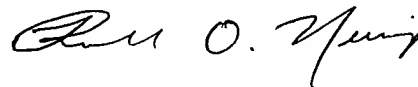Transmitted herewith in triplicate is an Appeal Brief for the above-identified application.

Charge any additional fees, or credit overpayment to Deposit Account No. 20-0668. **This form is submitted in triplicate.**

Respectfully submitted,

03/12/1998 MPEOPLES 00000053 DA#:200668  08419229
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## APPELLANTS' BRIEF

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

In support of their appeal of the Final Rejection of claims in the above-referenced application, Appellants respectfully submits herein their Brief.

## I. REAL PARTY IN INTEREST

Texas Instruments Incorporated is the real party in interest.

## II. RELATED APPEALS AND INTERFERENCES

Appellants' legal representative is not aware of any related appeals or interferences.

## III. STATUS OF CLAIMS

Claims 1-19 are pending in the application. Final Rejection of Claims 1-19 was made by the Examiner in an Office Action dated March 27, 1997. Claims 1-19 are on appeal and are reproduced in the Appendix to Appellants' Brief filed herewith.

## IV. STATUS OF AMENDMENTS

Appellants filed an amendment under 37 C.F.R. 1.116 on May 12, 1997, in response to the Final Rejection of March 3, 1997, requesting reexamination and reconsideration - no amendments were made to the specification or claims. In an Advisory Action dated June 9, 1997, the Examiner indicated that the request for reconsideration had been fully considered, but was not deemed to be persuasive.

## V. SUMMARY OF THE INVENTION

A voice activated Hypermedia system using grammatical metadata, the system comprising: a speech user agent; a browsing module; and an information resource. The system may include: embedded intelligence in hypermedia source; a means for processing the actions of a user based on the embedded intelligence; a means for returning a result of the action to the user. In addition, the hypermedia source maybe a HTML page or an instructional module for communicating allowed actions by a user. The system may also include embedded intelligence as a grammar or reference to a grammar. The grammar may be dynamically added to a speech recognizer. In addition, the actions can come from a speech recognizer. Furthermore, the system may include voice activated hypermedia links and intelligent modules that process information from the information resources for allowing actions from the user. Other devices, systems and methods are also disclosed.

## VI.   ISSUE

Are Claims 1-19 patentable under 35 U.S.C. § 103 over Stefanopoulos et al. (5,333,237) in view of Schmandt et al. ("Augmenting a Window System with Speech Input", Computer Magazine, 8/90, Vol. 23, Issue 8, pages 50-56)?

## VII.   GROUPING OF CLAIMS

Claims 1-4 stand or fall together and Claim 5-19 stand separately.

## VIII.   ARGUMENT

### The Rejection

Claims 1-19 are rejected under 35 U.S.C. § 103 as being unpatentable over Stefanopoulos et al., (5,333,237) and in view of Schmandt et al., ("Augmenting a Window System with Speech Input", Computer Magazine, 8/90, Vol. 23, Issue 8, pages 50-56).

As per claims 1-19, Stefanopoulos et al., in view of Schmandt et al., teach the limitations as described in paper #4, paragraph #3, except for the newly added limitation of "... an information resource located on a computer network...". Schmandt et al., a teach a window system that links together workstations. (Page 51, Col. 2, paragraph 3, "Windows systems..."). It would have been obvious to one with ordinary skill in the art at the time of invention that workstations linked together form a network and are served by a server which acts as an information resource, because an artisan would recognize that this is an efficient usage of space available.

### Appellant's Argument

Independent Claim 1 requires and positively recites, A **voice activated** Hypermedia system using grammatical metadata, said system comprising: "a **speech user agent**", "a **network** browsing module" and "an information resource located on a computer **network** wherein said **speech user agent facilitates voice activation of said network browsing module to access said information resource**".

Independent Claim 11 requires and positively recites, A **voice activated** Hypermedia system using grammatical metadata, said system comprising: "a **speech user agent**", "a **network** browsing module", "an information resource located on a computer **network** wherein said **speech user agent facilitates voice activation of said network browsing module to access said information resource**", "a means for extracting a grammar from a hypermedia source on said information resource for future reference to said source", "a means for modifying said grammar", "a means for automatically producing an intelligent grammar from said information resource" and "a means for processing said grammar to produce a reference to said hypermedia".

Independent Claim 14 requires and positively recites, A **voice activated** Hypermedia system using grammatical metadata, said system comprising: "a **speech user agent**", "a browsing module", "an information resource" and "a means for producing a grammar from textual representation of links to said information resource".

In contrast, Stefanopoulos et al discloses a computer-aided expert system including a programmed computer having a memory for storing an expert system and electronic documents, a display for displaying results of decisions made by the expert system, and selection means for selecting information to be displayed on the display. Stefanopoulos's computer-aided expert system comprises a hypermedia structured expert system and a hypermedia-structured multi-level electronic document archive linked thereto. As a result, Stefanopoulos fails to teach or suggest: A **voice activated** Hypermedia system using grammatical metadata, said system comprising: "a **speech user agent**", "a **network** browsing module" and "an information resource located on a computer **network** wherein said **speech user agent facilitates voice activation of said network browsing module to access said information resource**", as required by Claim 1; A **voice activated** Hypermedia system using grammatical metadata, said system comprising: "a

speech user agent", "a network browsing module", "an information resource located on a computer network wherein said speech user agent facilitates voice activation of said network browsing module to access said information resource", "a means for extracting a grammar from a hypermedia source on said information resource for future reference to said source", "a means for modifying said grammar", "a means for automatically producing an intelligent grammar from said information resource" and "a means for processing said grammar to produce a reference to said hypermedia", as required by Claim 11; or A voice activated Hypermedia system using grammatical metadata, said system comprising: "a speech user agent", "a browsing module", "an information resource" and "a means for producing a grammar from textual representation of links to said information resource", as required by Claim 14.

The Schmandt reference discusses a speech interface for windows based workstations in which speech was found to be a useful input in a workstation having a visually complex overlapping windows system. The reference states that the authors of the article had developed a user interface specification language so that voice commands could interact with applications by generating a series of mouse-motion, button-press, and key-press events (page 50, col. 3, lines 6-11). Schmandt fails to teach or suggest that speech interface for a windows based workstation is or can be used in hypermedia networked workstations.

The Examiner combined the Stefanopoulos and Schmandt references to obviate Claims 1-19. When reviewing a 35 U.S.C. § 103 combination rejection, the issue is "does the prior art provide some teaching, suggestion, or incentive to make the combination made by the inventor"? Even if cited art does disclose components of the device in issue, case law holds that it is insufficient that the prior art discloses the components of the device in issue, either separately or used in other combination; there must be some teaching, suggestion, or incentive to make the combination made by the inventor. Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934, 15 USPQ2d 1321, 1323 (Fed. Cir. 1990). Moreover, "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined ONLY if there is some suggestion or incentive to do so." ACS Hosp. Systems, Inc. v.

Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Laskowski, 871 F.2d 115, 10 USPQ2d 1397 (Fed. Cir. 1989); In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

The Examiner finds basis for a network system from a single statement in Schmandt which he thereafter uses as the basis of his improper argument. The Examiner's argument is as follows: A) Examiner believes Schmandt discloses networked workstations, + B) Examiner finds a dictionary definition of "server" that includes the word "workstations", = C) The combination of these two suggests that Schmandt teaches the use of speech in a network environment. The Examiner uses this reasoning to obviate Appellants' invention. The Examiner's argument is flawed as outlined below.

First, Schmandt does not teach or suggest the use of speech in a network environment. The quoted statement has been distorted out of context. The full statement is as follows:

> **Window Systems.** Windows are now commonplace on bitmapped computer workstations. Window systems allow the screen to be divided into a number of regions, with each allocated to input or output from a particular computer process or program. Because windows are so ubiquitous and are indeed the substrate on which so much workstation use is based, we felt that no research into speech and user interfaces should ignore them. We chose to work with the X Window System because it is a de facto standard across workstations (page 51, col. 2, lines 41-54).

The above paragraph emphasizes the reason for choosing a particular windows environment. Because of the widespread use of X-Windows, the authors chose this environment for research and implementation of their idea. The statement merely means that the X-Windows environment is used in many systems. Therefore, the statement "across workstations" means in the installed base of workstations there are many which have the X-Windows operating system.

This paragraph in no way suggests a network application of a speech system, particularly as claimed by Appellants.

Second, the Examiner uses the plural word "workstations" to find in a dictionary a definition of the term server that also uses the term "workstations" to infer that Schmandt suggests Appellants' invention. But, again, the term was used in the context of multiple workstations - NOT in the sense of work stations that are interconnected. As a result, there is no basis for inferring that a server is necessarily involved.

Even assuming, arguendo, that Schmandt somehow suggests using its software in a networked environment, a combination of the Stefanopoulos and Schmandt references fails to teach the inventions of Claim 1, 11 and 14. Appellants claim an information resource which is not a typical local data base such as Stefanopoulos's expert system. Appellants claim a system for accessing remote data across a network such as the internet. In addition, Appellants claim a grammar located in the remote data, or HTML page, which is then accessed by a network browser. The cited combination fails to teach or suggest these elements.

Further, the cited combination fails to teach or suggest a network browser which is described in the specification and claimed by Appellants. The Examiner has used the user interface associated with the expert system to find the browser element of Appellants' claims.

The Examiner has not shown motivation to combine the references and then make the further enhancements to the combination to achieve Appellants' invention. Motivation seems particularly lacking where the cited art is not concerned with the same problems solved by Appellants' invention. Appellants' invention is concerned with improving the ease of using a complex database such as the internet. It allows the user to easily make voice grammars for accessing the World Wide Web, and to create speakable hyperlinks to pages accessed on the web. The cited combination of references does not teach or suggest to one in the art ways to accomplish these ends, thus, how the Examiner finds the cited art makes Appellants invention obvious without using Appellants' invention to piece together the prior art and fill in the missing pieces is not clearly shown. The combination of the cited references does not suggest to one in

the art anything even similar to Appellants' invention without using Appellant's application as a guidebook.

As a result, the PTO has improperly used hindsight and Appellants' disclosure to obviate his claimed invention. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed.Cir.1991). See also Interconnect planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed.Cir.1985). Moreover, this Court has stated that "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

Claims 2-4 stand or fall with Claim 1. Claims 5-10, 12, 13, and 15-19 stand allowable as depending from allowable claims and including further limitations not taught or suggested by the Stefanopoulos and Schmandt references.

Claim 5 further defines the system of Claim 2, wherein said hypermedia resource is a HTML page. In addition to the previously discussed rationale for the patentability of Claim 1 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggest that said "hypermedia resource is a HTML page". While Stephanopoulos discloses a hypermedia computer-aided expert system, it fails to teach or suggest that said "hypermedia resource is a HTML page". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include a that said "hypermedia resource is a HTML page", without the improper hindsight provided by Appellants' disclosure.

Claim 6 further defines the system of Claim 1, wherein said system further includes an instructional module for communicating allowed actions by a user. In addition to the previously discussed rationale for the patentability of Claim 1 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests "an instructional module for communicating allowed actions by a user" . While

Stephanopoulos discloses a hypermedia computer-aided expert system, it fails to teach or suggest "an instructional module for communicating allowed actions by a user". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include "an instructional module for communicating allowed actions by a user", without the improper hindsight provided by Appellants' disclosure.

Claim 7 further defines the system of Claim 2, wherein said embedded grammar is a smart page grammar. In addition to the previously discussed rationale for the patentability of Claim 1 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests "an embedded grammar is a smart page grammar" . While Stephanopoulos discloses a hypermedia computer-aided expert system, it fails to teach or suggest "an embedded grammar is a smart page grammar". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include "an embedded grammar that is a smart page grammar", without the improper hindsight provided by Appellants' disclosure.

Claim 8 further defines the system of Claim 2, wherein said embedded grammar is a reference to a grammar located in said information resource. In addition to the previously discussed rationale for the patentability of Claim 1 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests "an embedded grammar is a reference to a grammar located in said information resource". While Stephanopoulos discloses a hypermedia computer-aided expert system, it fails to teach or suggest "an embedded grammar is a reference to a grammar located in said information resource". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include "an embedded grammar that is a reference to a grammar located in said information resource", without the improper hindsight provided by Appellants' disclosure.

Claim 9 further defines the system of Claim 2, wherein said grammar is dynamically added to a speech recognizer. In addition to the previously discussed rationale for the patentability of Claim 1 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching

in a combination of the references that teaches or suggests "a grammar that is dynamically added to a speech recognizer". While Stephanopoulos discloses a hypermedia computer-aided expert system and Schmandt discusses a speech interface for windows based systems, the combination fails to teach or suggest "a grammar that is dynamically added to a speech recognizer". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include "a grammar that is dynamically added to a speech recognizer", without the improper hindsight provided by Appellants' disclosure.

Claim 10 further defines the system of Claim 3, wherein said actions come from a speech recognizer. In addition to the previously discussed rationale for the patentability of Claim 1 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests "wherein said actions come from a speech recognizer". While Stephanopoulos discloses a hypermedia computer-aided expert system and Schmandt discusses a speech interface for windows based systems, the combination fails to teach or suggest "wherein said actions come from a speech recognizer". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include "wherein said actions come from a speech recognizer", without the improper hindsight provided by Appellants' disclosure.

Claim 12 further defines the system of Claim 11, wherein said system further includes a means for tokenizing a title for addition into said grammar. In addition to the previously discussed rationale for the patentability of Claim 11 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests "a means for tokenizing a title for addition into said grammar". While Stephanopoulos discloses a hypermedia computer-aided expert system and Schmandt discusses a speech interface for windows based systems, the combination fails to teach or suggest "a means for tokenizing a title for addition into said grammar". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include "a means for tokenizing a title for addition into said grammar", without the improper hindsight provided by Appellants' disclosure.

Claim 13 further defines the system of Claim 11, wherein said system includes a means for dynamically adding said grammar to a speech recognizer. In addition to the previously discussed rationale for the patentability of Claim 11 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests "a means for dynamically adding said grammar to a speech recognizer". While Stephanopoulos discloses a hypermedia computer-aided expert system and Schmandt discusses a speech interface for windows based systems, the combination fails to teach or suggest "a means for dynamically adding said grammar to a speech recognizer". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include "a means for dynamically adding said grammar to a speech recognizer", without the improper hindsight provided by Appellants' disclosure.

Claim 15 further defines the system of Claim 14, wherein said system further includes a means for recognizing sentences from said grammar to follow said links to said information resource. In addition to the previously discussed rationale for the patentability of Claim 11 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests "a means for recognizing sentences from said grammar to follow said links to said information resource". While Stephanopoulos discloses a hypermedia computer-aided expert system and Schmandt discusses a speech interface for windows based systems, the combination fails to teach or suggest "a means for recognizing sentences from said grammar to follow said links to said information resource". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include "a means for recognizing sentences from said grammar to follow said links to said information resource", without the improper hindsight provided by Appellants' disclosure.

Claim 16 further defines the system of Claim 14, wherein said system further includes a means for adding said grammars dynamically to said system. In addition to the previously discussed rationale for the patentability of Claim 14 over the combination of the Stefanopoulos and

Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests "a means for adding said grammars dynamically to said system". While Stephanopoulos discloses a hypermedia computer-aided expert system and Schmandt discusses a speech interface for windows based systems, the combination fails to teach or suggest "a means for adding said grammars dynamically to said system". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include "a means for adding said grammars dynamically to said system", without the improper hindsight provided by Appellants' disclosure.
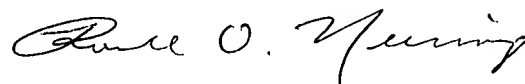
Claim 17 further defines the system of Claim 14, wherein said grammars further include word pronunciations. In addition to the previously discussed rationale for the patentability of Claim 14 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests that "said grammars further include word pronunciations". While Stephanopoulos discloses a hypermedia computer-aided expert system and Schmandt discusses a speech interface for windows based systems, the combination fails to teach or suggest that "said grammars further include word pronunciations". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include that "said grammars further include word pronunciations", without the improper hindsight provided by Appellants' disclosure.

Claim 18 further defines the system of Claim 14, wherein said grammars further include multiple options for tokenization. In addition to the previously discussed rationale for the patentability of Claim 14 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests that "said grammars further include multiple options for tokenization". While Stephanopoulos discloses a hypermedia computer-aided expert system and Schmandt discusses a speech interface for windows based systems, the combination fails to teach or suggest that "said grammars further include multiple options for tokenization". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include that "said grammars further include multiple options for tokenization", without the improper hindsight provided by Appellants' disclosure.

Claim 19 further defines the system of Claim 17, wherein said system further includes a means for dictionary lookup. In addition to the previously discussed rationale for the patentability of Claim 17 over the combination of the Stefanopoulos and Schmandt, Appellants can find no teaching in a combination of the references that teaches or suggests "a means for dictionary lookup". While Stephanopoulos discloses a hypermedia computer-aided expert system and Schmandt discusses a speech interface for windows based systems, the combination fails to teach or suggest "a means for dictionary lookup". Appellants submit that one skilled in the art would not be motivated to modify a system the combination of the Stefanopoulos and Schmandt references, to include that "a means for dictionary lookup", without the improper hindsight provided by Appellants' disclosure.

For the above reasons, favorable consideration of the appeal of the Final Rejection in the above-referenced application, and its reversal, are respectfully requested.

Respectfully submitted,

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## APPENDIX

1.      A voice activated Hypermedia system using grammatical metadata, said system comprising:
      a.      a speech user agent;
      b.      a network browsing module; and
      c.      an information resource located on a computer network wherein said speech user agent facilitates voice activation of said network browsing module to access said information resource.

2.      The system of Claim 1, wherein said system further includes a grammar embedded in said hypermedia information resource.

3.      The system of Claim 2, wherein said system further includes a means for processing the verbal directions of a user based on said grammar.

4.      The system of Claim 3, wherein said system further includes a means for returning a result of said verbal directions to said user.

5.      The system of Claim 2, wherein said hypermedia resource is a HTML page.

6.      The system of Claim 1, wherein said system further includes an instructional module for communicating allowed actions by a user.

7.      The system of Claim 2, wherein said embedded grammar is a smart page grammar.

8.      The system of Claim 2, wherein said embedded grammar is a reference to a grammar located in said information resource.

9.      The system of Claim 2, wherein said grammar is dynamically added to a speech recognizer.

10.     The system of Claim 3, wherein said actions come from a speech recognizer.

11.     A voice activated Hypermedia system using grammatical metadata, said system comprising:
      a.      a speech user agent;
      b.      a network browsing module;
      c.      an information resource located on a computer network wherein said speech user agent facilitates voice activation of said network browsing module to access said information resource;
      d.      a means for extracting a grammar from a hypermedia source  on said information resource for future reference to said source;

e.    a means for modifying said grammar;
f.    a means for automatically producing an intelligent grammar from said information resource; and
g.    a means for processing said grammar to produce a reference to said hypermedia source.

12.    The system of Claim 11, wherein said system further includes a means for tokenizing a title for addition into said grammar.

13.    The system of Claim 11, wherein said system includes a means for dynamically adding said grammar to a speech recognizer.

14.    A voice activated Hypermedia system using grammatical metadata, said system comprising:
a.  a speech user agent;
b.  a browsing module;
c.  an information resource; and
d.  a means for producing a grammar from textual representation of links to said information resource.

15.    The system of Claim 14, wherein said system further includes a means for recognizing sentences from said grammar to follow said links to said information resource.

16.    The system of Claim 14, wherein said system further includes a means for adding said grammars dynamically to said system.

17.    The system of Claim 14, wherein said grammars further include word pronunciations.

18.    The system of Claim 14, wherein said grammars further include multiple options for tokenization.

19.    The system of Claim 17, wherein said system further includes a means for dictionary lookup.